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November 4, 1991

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Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, Room 222
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Federal Communications Commission
Office of the Secretary

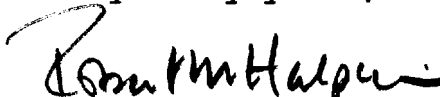
Re: Loral Qualcomm Satellite Services, Inc.

Dear Ms. Searcy:

Transmitted herewith for filing on behalf of Loral Qualcomm Satellite Services, Inc., are an original and four copies of its Petition for Rulemaking.

Should there be any questions regarding this document, please contact this office.

Very truly yours,


Robert M. Halperin

Attachment

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NOV - 4 1991

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

Federal Communications Commission
Office of the Secretary

In the matter of:

LORAL QUALCOMM SATELLITE
SERVICES, INC.

Petition for Amendment
of Parts 2 and 25 of the
Commission's Rules to
Implement LEO Satellite
Systems in the RDSS Bands

File No. _____

PETITION FOR RULEMAKING

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November 4, 1991

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SUMMARY

Loral Qualcomm Satellite Services, Inc. (LQSS) requests that the Commission amend Parts 2 and 25 of its Rules to facilitate the operation of low earth orbit (LEO) satellite systems, such as LQSS's proposed GLOBALSTAR system, which will provide radiodetermination, voice and data services in the Radiodetermination Satellite Service (RDSS) bands. Also requested is the adoption of procedures for licensing LEO systems which will promote open entry policies in this service.

The Commission should amend Sections 2.106 and 25.141(d) to allow satellite system operators to provide mobile voice, data and RDSS services in the bands currently allocated to RDSS on a primary basis. Other requested amendments would accommodate alternate frequency plans proposed in the GLOBALSTAR application:

	<u>System A</u>	<u>System B</u>
Satellite-to-user	1610.0-1626.5 MHz	2483.5-2500.0 MHz
User-to-satellite	1610.0-1626.5 MHz	1610.0-1626.5 MHz
Satellite-to-gateway	5199.5-5216.0 MHz	5158.5-5216.0 MHz
Gateway-to-satellite	6525.0-6541.5 MHz	6484.0-6541.5 MHz

For System A, LQSS seeks an amendment to allow use of the L-band for both downlinks and uplinks. For System B, LQSS seeks an amendment to increase the bandwidth of the RDSS feeder links and to exceed the power flux density limits in the S-band.

The proposed amendments would serve the public interest by allowing LQSS through GLOBALSTAR to provide low-cost, spectrally efficient RDSS, mobile voice and data services in all areas of the United States. No RDSS system is currently employing the

Commission's spectrum allocation for RDSS. Since the allocation for RDSS, technological advances have made feasible deployment of small LEO satellites for delivery of commercial communications services. Moreover, the public demand for mobile satellite communications, including voice and data services, has increased, and, the spectrum allocated to MSS is severely congested.

GLOBALSTAR would use the advances in satellite and other communications system technologies to provide RDSS, mobile voice and data services in the RDSS bands. Thus, it would provide the public benefits long-recognized for RDSS as well as help meet the increasing demand for mobile voice and data services. The requested amendments for spectrum allocation are also consistent with the Commission's proposals to the 1992 WARC Conference.

LQSS also petitions the Commission to adopt licensing procedures for LEO satellite systems which will allow multiple entry of applicants without delay. The public will benefit from open entry by receiving better and less expensive service through competition and by avoiding costly comparative licensing procedures. Finally, the petitioner requests that the Commission establish an Industry Advisory Committee to address technical issues and disputes which arise among the various proposed LEO systems.

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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC

NOV - 4 1991

Federal Communications Commission
Office of the Secretary

In the matter of:

LORAL QUALCOMM SATELLITE
SERVICES, INC.^{1/}

Petition for Amendment
of Parts 2 and 25 of the
Commission's Rules to
Implement LEO Satellite
Systems in the RDSS Bands

File No. _____

PETITION FOR RULEMAKING

Pursuant to Section 1.401 of the Commission's Rules, Loral Qualcomm Satellite Services, Inc. (LQSS), by its attorneys, hereby submits this Petition for Rulemaking and requests that the Commission initiate a rulemaking proceeding (1) to amend Parts 2 and 25 of its Rules to facilitate the operation of low earth orbit (LEO) satellite systems providing radiodetermination, voice and data services in the Radiodetermination Satellite Service (RDSS) bands and (2) to adopt procedures for licensing LEO systems which will promote the Commission's open entry policies in this service.^{2/}

^{1/} At the time of filing, the Applicant was known as "Loral Cellular Systems, Corp." The change in the name of the Applicant was reported to the Commission in an amendment filed October 11, 1991.

^{2/} Pursuant to Section 1.402 of the Commission's Rules and the Commission's Report and Order establishing procedures to award pioneer's preferences, 6 FCC Rcd 3488, 3492, ¶ 37 (1991), the Petitioner is filing concurrently with this

LQSS believes that the Commission can proceed with the processing of the applications to utilize the RDSS bands without completing a rulemaking or by initiating an expedited rulemaking.^{3/} This can be accomplished by addressing the request for waiver of Commission Rules in LQSS's GLOBALSTAR application, along with the requests for rule waivers by other applicants proposing RDSS systems. Nevertheless, in accordance with the Commission's requirements for requests for pioneer's preferences, 6 FCC Rcd 3488, ¶ 37 (1990), and in the event that the Commission desires to consider this matter in a rulemaking context, LQSS is submitting this Petition.^{4/}

GLOBALSTAR

On June 3, 1991, LQSS filed an application seeking authority to construct GLOBALSTAR, a satellite system which will offer global RDSS and mobile voice and data services to and from hand-held and vehicle-mounted transceivers.^{5/} By combining the use of

petition a request for award of a pioneer's preference with regard to the GLOBALSTAR satellite communications system.

3/ In preparing for the 1983 Region 2 Administrative Radio Conference, the Commission conducted an expedited rulemaking to establish Direct Broadcast Satellite Service, processed a number of applications, and convened an Industrial Advisory Committee in less than 18 months. See Inquiry into the Development of Regulatory Policy in Regard to Direct Broadcast Satellites, 51 RR 2d 1341 (1982), on recon., 53 RR 2d 1637 (1983), aff'd in part, vacated in part sub nom. National Ass'n of Broadcasters v. FCC, 740 F.2d 1190 (1984).

4/ In addition, this rulemaking petition supports LQSS's Request for Pioneer's Preference based on proposed new and beneficial use of the RDSS bands as well as on the technical innovations in LQSS's system proposal.

5/ The application was accepted for filing on October 24, 1991 (DA 91-1308).

LEO satellites with existing terrestrial communications systems and innovative, highly-efficient spread spectrum techniques, the GLOBALSTAR system will provide users throughout the United States with low-cost, reliable communications to and from both domestic and foreign markets.

GLOBALSTAR uses a constellation of 24 or 48 operating LEO satellites to provide coverage for services in the United States and throughout the globe. The enhanced system of 48 satellites makes GLOBALSTAR services available to millions of users around the world.

GLOBALSTAR incorporates existing terrestrial communications facilities into its overall configuration through gateway earth station interfaces. This interoperability of the system with the PSTN enhances the system's reliability and decreases costs to the end user by reducing the complexity of the space segment. By complementing rather than replacing existing terrestrial carriers, GLOBALSTAR is designed to achieve rapid adoption throughout the United States, and eventually, the world.

GLOBALSTAR is designed to operate in two configurations, depending on the actions of the 1992 World Administrative Radio Conference ("WARC-92") and the Commission. System A employs space/earth links in the L-band with C-band feeder links; System B employs the L- and S-bands for earth-to-space and space-to-earth links, respectively, with C-band feeder links. Both of these innovative systems are cost effective, will provide significant public interest benefits, and can operate compatibly with other proposed LEO systems. By this petition for rulemaking, LQSS

requests that the Commission amend certain frequency use aspects of Parts 2 and 25 of its Rules to ensure that the public will receive full access to this innovative and efficient communications system.

GLOBALSTAR is designed to operate compatibly with other LEO satellite systems providing RDSS, voice and data services. This capability enables the Commission to further its open entry objectives for RDSS by authorizing competing systems. Furthermore, the GLOBALSTAR system can operate without causing harmful interference to geostationary RDSS systems, radionavigation systems and GLONASS. Accordingly, LQSS also requests in this petition that the Commission establish a policy of open entry for all applicants proposing LEO-type RDSS, voice and data communications systems, which otherwise meet the Commission's technical, legal and financial qualifications.

I. PARTS 2 AND 25 OF THE COMMISSION'S RULES SHOULD BE AMENDED TO PERMIT GLOBALSTAR'S PROPOSED FREQUENCY USAGE.

Since the current allocation for RDSS was established in 1985, technological advances have made possible differences in the services which can be efficiently offered through the spectrum allocated. As a result, the public interest would be served by amending Parts 2 and 25 of the Commission's Rules to permit a RDSS, voice and data service in the spectrum reserved for RDSS.

A. Satellite Technology and Consumer Demand Have Changed the Marketplace for Satellite Communications Services.

In 1985, the Commission allocated spectrum for the RDSS satellite service, providing frequency in the L-band (1610.0-1626.5 MHz) for the user-to-satellite uplink, S-band (2483.5-2500.0 MHz) for the satellite-to-user downlink, and the C-bands for feeder links between terrestrial control centers and satellites (5150-5216.0 MHz for the downlink, 6525.0-6541.5 MHz for the uplink).^{6/} Radiodetermination Satellite Service ("RDSS Allocation Order"), 58 RR 2d 1416 (1985), on recon., 60 RR 2d 245 (1986).

At the time of allocation and initial licensing of the first proposed RDSS service providers, see Radiodetermination Satellite Service ("RDSS Licensing Order"), 60 RR 2d 298 (1986), the Commission decided to allocate these bands for RDSS service, and to maintain a separate allocation for voice and data services in the mobile satellite service. See RDSS Allocation Order, 58 RR 2d at 1417-19. However, none of the initial four RDSS licensees has been able to provide RDSS service to the public. At the time the GLOBALSTAR application was filed, only GEOSTAR Corp. remained licensed as an RDSS service provider. As the Commission is aware, GEOSTAR has sought protection under the United States bankruptcy laws,^{7/} and has been unable to locate additional sources of

^{6/} 6525.0-6541.5 MHz is available as a feeder link because it is allocated to the Fixed-Satellite Service.

^{7/} See Geostar Positioning Corporation, 6 FCC Rcd 2276, ¶ 19 (CCB 1991).

investment to continue operation.^{8/} Thus, the RDSS spectrum remains unused.

Since the initial allocation of spectrum for RDSS, technological advances have made feasible deployment of small satellites operating in low-earth orbit for the provision of commercial communications services. Developments in multiple beam antennas, low-rate voice encoding techniques and spread spectrum techniques allow multiple voice channels to be transmitted through the bandwidth and power associated with RDSS.

Further, the public has made known its increasing demand and need for mobile satellite communications, particularly voice and data services. This demand for mobile telephone service has seen a corresponding advance in cellular telephone technology, including the commercial application of spread spectrum Code Division Multiple Access (CDMA) techniques, which are put to beneficial use in the GLOBALSTAR system.

At the same time, segments of the L- and S-bands allocated to the mobile satellite service (MSS) are severely congested, as the Commission has recognized in planning for the 1992 WARC.^{9/} Indeed, the Commission has proposed that more spectrum be allocated for MSS. An Inquiry Relating to Preparation for the International Telecommunication Union World Administrative Conference ("1992 WARC Report"), 6 FCC Rcd 3900, 3906 (1991).

^{8/} "Geostar to Shut Down," Space News, May 13-19, 1991.

^{9/} An Inquiry Relating to Preparation for the International Telecommunication Union World Administrative Radio Conference, 5 FCC Rcd 6046, 6055-57 (1990) (Second Notice of Inquiry).

Significant amounts of spectrum are proposed for MSS allocations in the United States proposals to WARC-92.^{10/}

The public interest will be served by amendment or waiver of the rules to permit operation of LEO satellite communications systems, such as GLOBALSTAR, which would provide RDSS, voice and data services in the frequencies currently allocated to RDSS. In this way, the Commission not only would ensure that the public fully receives the benefits long-recognized for RDSS, but also would provide for the increasing demand and need for mobile voice and data services. The amendments proposed herein also are consistent with the Commission's proposal to WARC-92 to add MSS to the spectrum currently allocated to RDSS on a co-primary basis in all three ITU Regions. 1992 WARC Report, 6 FCC Rcd at 3906. This proposal, as well as the Commission's proposal to make RDSS a primary allocation throughout the world, is included in the United States proposals to the Conference.^{11/}

^{10/} See United States Proposals for the 1992 World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, U.S. Department of State, Washington, D.C., July 1991.

^{11/} See United States Proposals for the 1992 World Administrative Radio Conference for Dealing with Frequency Allocations in Certain Parts of the Spectrum, U. S. Department of State, Washington, D. C. July, 1991.

B. The GLOBALSTAR Frequency Proposals Will Provide Low-Cost and Spectrum-Efficient RDSS, Voice and Data Services.

LQSS has proposed two alternative frequency plans for the GLOBALSTAR system:

	<u>System A</u>	<u>System B</u>
Satellite-to-user	1610.0-1626.5 MHz	2483.5-2500.0 MHz
User-to-satellite	1610.0-1626.5 MHz	1610.0-1626.5 MHz
Satellite-to-gateway	5199.5-5216.0 MHz	5158.5-5216.0 MHz
Gateway-to-satellite	6525.0-6541.5 MHz	6484.0-6541.5 MHz

In System A, GLOBALSTAR will utilize the designated RDSS L-band spectrum for both satellite/user links, that is, for both the uplink and the downlink. System A also would use the RDSS C-band feeder link spectrum for GLOBALSTAR's gateway/satellite links.

With System A, GLOBALSTAR would employ time domain duplexing (TDD) -- frequency division -- code division multiple access (CDMA) with beam hopping. The L-band spectrum would be divided into 13 sub-bands of 1.25 MHz bandwidth. Using synchronized CDMA techniques, CDMA sub-bands can be spaced relatively closely with minimum adjacent channel interference. The system would employ a 60 msec TDD frame with six 10 msec time slots, three for transmission and three for receiving. Within each time slot, the signals would either transmit or receive via two beams (beam hopping). TDD will minimize interference to and from other systems, while beam hopping will reduce mutual interference to and from beams.

The L-band spectrum is thus reused two times for both uplink and downlink. The same spectrum is reused three times through beam hopping, and again for each of the 48 proposed satellites.

Thus, System A reuses the L-band 288 times. The C-band feeder link spectrum is reused twice per satellite through dual polarization.

System B presents an alternative design which can provide service to the United States employing the RDSS L-band for the user-to-satellite uplink and the RDSS S-band spectrum for the satellite-to-user downlink. In the L- and S-band spectrum, the 16.5 MHz bandwidths are subdivided into thirteen 1.25 MHz sub-bands. CDMA again is used to support multiple access. The L- and S-band spectrum again is reused 288 times through multiple beam antenna technology (six times) and multiple satellites (48 times).

To accommodate signals from the six spot beams, however, additional feeder link bandwidth is necessary. Consequently, System B requires use of the RDSS C-band frequencies allocated for RDSS feeder links as well as FSS spectrum 6484.0-6541.5 MHz for the feeder uplinks and 5158.5-5216.0 MHz for the feeder downlinks. The C-band spectrum for these feeder links will be reused through dual polarization.

System B does not employ beam hopping or TDD; however, it has the capability of accommodating other techniques without changing the satellite design.

C. The Commission Should Adopt Minor Amendments to its Rules Which, in Any Event, Are Consistent with Its 1992 WARC Proposal.

In order for the GLOBALSTAR system to bring its innovative, efficient, and low-cost satellite communications services to the public, Petitioner requests that certain of the Commission's rules be amended.

First, Petitioner has proposed use of frequencies currently allocated in the United States to RDSS for a variety of communications services, including voice, data and RDSS. Accordingly, Petitioner seeks amendments of Sections 2.106 and 25.141(d) (formerly 25.392(d)) of the Commission's Rules to allow satellite system operators to provide mobile voice, data and RDSS services in the bands currently allocated to RDSS on a primary basis. This new allocation could be MSS and RDSS, on a co-primary basis, consistent with the Commission's proposal for the 1992 WARC. See 1992 WARC Report, 6 FCC Rcd at 3906.

Second, for System A, described above, Petitioner seeks an amendment to the allocations in Section 2.106 and in Section 25.202(a)(2), which would allow use of the L-band 1610.0-1626.5 MHz for downlinks as well as uplinks.^{12/} This allocation could be MSS/RDSS on a co-primary basis as well.

However, critical to the co-primary allocations of MSS/RDSS in the above-referenced bands is the need to ensure that communications systems in these bands using non-geostationary satellites can operate without harmful interference from geostationary satellites. As a component of achieving this objective, Sections 25.141(e) and (f) must be maintained or

^{12/} In the 1992 WARC Report, the Commission proposed allocation of the L-band frequency 1613.8 to 1626.5 MHz for MSS on a secondary basis for the space-to-earth downlink. 6 FCC Rcd at 3907. In the GLOBALSTAR application, Petitioner has provided data indicating that primary use of the RDSS L-band for the satellite-to-user link is technically compatible with other current and proposed uses. See GLOBALSTAR Application, Appendix 6 ("Interference Study").

appropriately modified to take account of the requirements of non-geostationary systems.^{13/}

Finally, Petitioner seeks an amendment to the Commission's Rules to increase the bandwidth of the RDSS feeder links and to exceed in the S-band 2483.5-2500.0 MHz the power flux density limit of:

$-154 + 0.5 (x-5) \text{ db(W/m}^2\text{)}$ in any 4 kHz band for angles of arrival X (in degrees) between 5 and 25 degrees above the horizontal plane.^{14/}

These limits relate to the power flux density which would be obtained under assumed free-space propagation conditions.

Relaxation of these limits by approximately 10 dB for the S-band is necessary to allow the spectrum to accommodate multiple voice capacity.^{15/} An alternative approach would be the allocation of additional S-band spectrum below 2500 MHz. An appropriate amount of additional bandwidth would obviate the need for an increase in the power flux density limit.

13/ The United States WARC-92 proposal to ensure that non-geostationary systems can operate successfully in a co-primary RDSS/MSS allocation is contained in Proposed Footnote 733Z.

14/ See RR 2557 in Appendix 28 of the Radio Regulations.

15/ From the numerous applications currently before the Commission, it appears likely that CDMA will be widely implemented by cellular and other systems in the United States, and accordingly, LQSS would expect to implement GLOBALSTAR using the System B proposal. In that event, Petitioner desires to have the full use of the L-, S- and C-bands currently allocated on a primary basis for RDSS in the United States for this system.

II. THE PROPOSED AMENDMENTS WOULD SERVE THE PUBLIC INTEREST BY PROVIDING FOR LOW-COST, EFFICIENT RDSS, VOICE AND DATA SERVICES IN ALL AREAS OF THE UNITED STATES.

The amendments to the Commission's Rules proposed in the preceding section will serve the public interest by promoting the maximum use of the RDSS spectrum and satisfying the substantial public and institutional needs for RDSS service.

As noted above, the RDSS spectrum currently is not being used for RDSS service. The GLOBALSTAR proposal for use of RDSS will allow maximum use of the allocated frequencies, and prevent these frequencies from lying fallow. The proposed amendments also will ensure that these frequencies are used to provide RDSS service, the importance of which has been long recognized by the Commission.

Creation of an RDSS/voice and data frequency allocation, will satisfy two important objectives. First, the history of RDSS suggests that pure RDSS systems may not be economically feasible. By providing the capacity for the RDSS spectrum to accommodate both voice and RDSS services, the Commission will assure the public of receiving the benefits of RDSS.

Second, an RDSS/voice and data service will help ensure that low-cost voice and data communications become available throughout the United States, including rural areas. Thus, the proposed allocation would meet the Commission's goal of promoting public safety and welfare with RDSS service as well as meeting the ubiquitous public demand for wireless voice communications service.

Moreover, the proposed amendments would enhance the competitiveness of the United States in the international communications marketplace. The GLOBALSTAR system combines efficient use of spectrum with innovative communications technology. The components of this technology -- spacecraft, launch services, gateway equipment and transceivers -- will receive international recognition. Such recognition will permit LEO technology to advance further as replacement satellites are planned, benefiting the public through lower costs and better service as well as promoting U.S. technology.

Further, in considering the public benefits of the proposed amendments, the Commission should give substantial weight to the fact that the frequency usage proposed by GLOBALSTAR is compatible with other LEO communications systems. Thus, the Commission can accommodate GLOBALSTAR and maintain its commitment to multiple entry for the RDSS spectrum so that the public can receive the benefits of competition among satellite communications service providers. See RDSS Licensing Order, 60 RR 2d at 301.

III. THE COMMISSION SHOULD ADOPT PROCEDURES FOR LICENSING LEO SATELLITE COMMUNICATIONS SYSTEMS IN THE RDSS BANDS WHICH PROMOTE OPEN ENTRY AND EXPEDITED IMPLEMENTATION.

The Commission has received a number of applications for satellite communications systems using the spectrum allocated to RDSS for various types of voice, data and RDS systems.^{16/} The Commission already has recognized that competition among multiple

^{16/} See, e.g., Applications of Motorola for "Iridium," TRW for "Odyssey," Constellation Communications, Inc., for "Aries," Ellipsat Corporation for "Ellipso II."

RDSS licensees would best promote the public interest. See Radiodetermination Satellite Service (RDSS Licensing Order), 60 RR 2d 298, 301 (1986). Accordingly, Petitioner requests that the Commission adopt procedures for licensing LEO satellite systems which will allow multiple entry of applicants without delay, thereby making these services available to the public at an early date.

A. An Open Entry Licensing Policy Would Best Serve the Public Interest.

The Commission has committed itself to allow "independently licensed multiple systems" for use of the RDSS spectrum. RDSS Licensing Order, 60 RR 2d at 301. Open entry systems promote competition among providers, fostering service at prices nearing costs as well as innovative technology to improve the services provided.

Many applicants requesting use of the RDSS spectrum have proposed LEO satellite communications systems providing voice and radiodetermination service. Open entry remains just as important a goal in considering these new applicants as it was for considering radiodetermination providers in 1985-1986.

The recently proposed voice and data services utilizing LEO satellites offer services which are likely to be of tremendous use and value to the public. As the Commission has recognized, the availability of radiodetermination communications services will be invaluable for many public safety and emergency purposes. Radiodetermination Satellite Service (RDSS Allocation Order), 58 RR 2d 1416, 1417-19 (1985), on recon., 60 RR 2d 245 (1986). All

persons, whether subscribers or not, will benefit from having such services widely available at low-cost to the actual subscriber.

The market projections provided by LQSS for voice and RDSS services associated with GLOBALSTAR indicate that demand will be great, and, within a few years, satellite communications services will become commonplace. See GLOBALSTAR Application, § I(3). Competition among service providers will ensure that the public will receive the most up-to-date and efficient satellite communications service. RDSS Licensing Order, 60 RR 2d at 301.

Open entry also will ensure that the public has the opportunity to select from the widest array of technology. For the Commission to select one LEO system over another may involve a significant waste of technology, and even the possibility that the wrong technology is selected. The applicants have spent large sums developing new communications systems, several or all of which may provide valuable service. The process of choosing one or two may mean the loss of use of technology developed for denied applications.^{17/}

Furthermore, as LEO satellites generally have a use expectancy of five to ten years, each licensee will be engaged in a continual process of replacement. By allowing open entry, the Commission can ensure that there is a concurrent process of research and development to provide more efficient, and competitive service in the future.

^{17/} Losing applicants may be forced to take their systems to foreign markets, which could cause a serious technology drain from the United States.

Finally, open entry will ensure that there is no diminution in service if one provider stops service. As long as there is competition, there will be other licensees able to fill the gap.

B. All Qualified Applicants for LEO Satellite Systems
Should Be Authorized to Construct Without the Delay
Inherent in Non-Open Entry Licensing Procedures.

The technology incorporated into LEO satellite communications systems, such as GLOBALSTAR, represents a significant advance in the telecommunications services which will be available to the public. As has been more fully set forth in the Section I(11) of the GLOBALSTAR application, the proposed system presents a low-cost service with a wide range of business, industrial, and private uses. The public interest would be greatly served by allowing GLOBALSTAR and similar systems to become available as soon as possible.

Open entry is in the public interest. There is no reason to delay the implementation of proposed systems through the use of long, expensive procedures unnecessary in an open entry context, such as comparative hearings. See RDSS Licensing Order, 60 RR 2d at 301. All applicants meeting the Commission's technical, legal and financial qualifications should be granted authorizations to construct, launch and operate their proposed RDSS/voice and data systems. Expertise, technology and the marketplace will then dictate their success in serving the public.

Open entry licensing avoids comparative hearings, thus speeding the provision of new communications services to the public, and conserving valuable public resources involved in what would no doubt be highly-litigated comparative hearings. In the

time which is likely needed to conduct such a hearing from start until finality, a system such as GLOBALSTAR could be constructed, launched and tested, and service to the public implemented. The comparative hearing process could double the time before the first lost hikers can radio their position to a park service using GLOBALSTAR.

Moreover, the applications for LEO satellite communications systems pending before the Commission lend themselves to an open entry, not a comparative hearing process. Generally, a comparative hearing is conducted to determine which of several applicants is best qualified to operate the same radio facility. Among the current modified RDSS applicants, no two applicants have proposed the same system. There are variations proposed in frequency use which may be accompanied by variations in technology which may, in turn, dictate the nature and extent of the service proposed.

The open entry approach avoids embroiling the Commission in debates concerning not only which applicant but also which technology would provide better service to the public. While the Commission must evaluate each proposal to determine whether a license for the system may be granted in the public interest, choosing among qualified applicants and multiple well-designed technologies, when multiple applicants could be permitted under the open entry approach, is not in the public interest. See RDSS Licensing Order, 60 RR 2d at 301-02.^{18/}

^{18/} The Commission may also encounter questions of fairness to competing applicants if issues were raised involving confidential commercial information. To debate the

Although a lottery system might save administrative time and expense, it would not provide the same benefits to the public as an open entry system in which all qualified applicants would be licensed. GLOBALSTAR and other LEO-satellite systems present the Commission with technical innovations in communications services. For one or more of these systems to be eliminated from public consideration through a lottery would squander millions of dollars in research and impede initiation of a potentially beneficial communications service.

Moreover, selection of one or a few systems through a lottery proceeding would deter rather than promote development of further technical advances. Satellite communications providers will not want to expend money to develop these systems if their potential for use depends upon chance. Cf. Establishment of Procedures to Provide a Preference to Applicants Proposing an Allocation for New Services, 6 FCC Rcd 3488, ¶ 32 (1991).^{19/}

The Commission has the discretion to select the procedure for licensing satellite systems which "will best conduce to the proper dispatch of business and to the ends of justice." 47 U.S.C. § 154(j); see RDSS Licensing Order, 60 RR 2d at 300. Open entry licensing will promote the best service and rapid implementation. Accordingly, the Commission should authorize construction by all

feasibility of a system, competing applicants might demand access to all technological information about the proposal. The knowledge that such information could in effect be made public may hinder the development or use of technology that would provide improved communications services to the public.

^{19/} Furthermore, there are not so many applications that the systems can be deemed so fungible so as to make the cost savings of a lottery selection procedure beneficial.

RDSS applicants which meet its technical, legal and financial qualifications.

C. An Industry Advisory Committee Should Be Established to Address LEO Technical Issues.

In allowing open entry to those applicants which meet its technical, legal and financial qualifications, there will be issues requiring coordination between and among systems. The goal of multiple entry -- rapidly delivering efficient service to the public -- could be stymied if the resolution of such issues required lengthy litigation before the Commission.

A better method for resolving such issues which might arise is to establish an Industry Advisory Committee on LEO technical issues on which all licensees and other interested parties would be represented. It is in the best interest of all service providers as well as the public to resolve quickly any issue which may delay or obstruct implementation of the proposed communications systems. The Commission has successfully used such Industry Advisory Committees in the past to assist it in developing technical rules and coordination guidelines.^{20/} With the proposals of new non-geostationary systems for provision of RDSS, voice and data services before it, the Commission can obtain the expert input needed to ensure technologically sound technical rules for the service.

^{20/} See Establishment of an Advisory Committee on Implementation of Reduced Orbit Spacing Between Domestic Fixed Satellites, 102 FCC 2d 390 (1985); Licensing of Space Stations in the Domestic Fixed-Satellite Service, 54 RR 2d 577 (1983), on recon., 57 RR 2d 653 (1985).

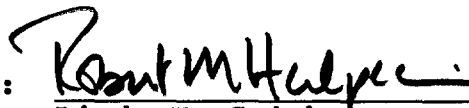
IV. CONCLUSION.

LQSS submits that the Commission may process the GLOBALSTAR application without a rulemaking proceeding by granting the rule waivers requested in the application. However, in the event the Commission desires to conduct a rulemaking for the proposed frequency usage, Petitioner requests that the Commission amend Sections 2.106, 25.141(d) and 25.202(a)(2) of its Rules, as more fully detailed above. In either event, LQSS requests that the Commission adopt the open access/multiple entry policy for licensing RDSS and RDSS/voice and data service providers discussed in this Petition.

Respectfully submitted,

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